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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,969	09/07/2000	Dr. Yiming Zhou	450110-02767	2147

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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

ZHONG, CHAD

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 11/10/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/656,969

Applicant(s)

ZHOU, DR. YIMING

Examiner

Chad Zhong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Claims 1-19 are presented for examination.
2. It is noted that although the present application does contain line numbers in specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.

Specification

3. Applicant is required to update the status (pending, allowed, etc.) of all parent priority applications in the first line of the specification. The status of all citations of US filed applications in the specification should also be updated where appropriate.

Information Disclosure Statement

4. An initialed and dated copy of Applicant's IDS form 1449, Paper No. 2, is attached to the instant Office action.

Claim Rejections - 35 USC § 112, second paragraph

5. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. The claim language in the following claims is murky or not clearly understood:
 - i. As per claim 2, line 1; claim 3, line 1; claim 4, line 1; claim 5, line 1; claim

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6, line 1; claim 7, line 1; claim 8, line 1; claim 9, line 1; claim 10, line 1, it is not clearly understood whether "a station" refers to "a station" in claim 1, line 1 (i.e.

if they are the same, the word such as "said" or "the" must be used);

ii. As per claim 10, line 3, it is not clearly understood whether "a service request message" refers to "service request" in claim 1, line 10 (i.e. if they are the same, the word such as "said" or "the" must be used);

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 (c) of this title before the invention thereof by the applicant for patent.

7. Claims 1, 3, 4, 8-13, 14-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shear et al. (hereinafter Shear), US 2001/0042043.

8. As per claim 1, Shear teaches A station for a network apparatus comprising said station and a plurality of other stations, all interconnected by a communication link, said station comprising:

a network connection (pg 6 [0069], lines 8-15);

a self assessment module operable to determine a current status of said station, wherein said current status is a measure of said stations available resources (pg 17, [251]; pg 19, [281]; pg 24, [351]);

a trust list that includes a station identifier for said or each other station which is designated as trusted

to perform tasks for said station (pg 24, [0342]);

a broadcast unit operable to transmit service requests to said network connection and onto said network, said service requests being directed to said or each other station identified in said trust list and constituting a request to said or each other station to perform a task for said station (pg 1, [0003]); and

an answer unit operable to receive service requests from said network through said network connection and, in response thereto, to transmit to said network through said network connection an acceptance or refusal message in respect of said service request, said acceptance or refusal being decided having regard to said current status of said station, as determined by said self assessment module (pg 17, [251]; pg 24, [351], [352]).

9. As per claim 3, Shear teaches a system security module operable to handle encryption between said station and said or each other trusted station (pg 30, claim 86).

10. As per claim 4, Shear teaches a task execution, monitoring and reporting module operable to broadcast to said network progress updates on tasks accepted by and being performed in said station on behalf of an other station (pg 19, [0281]; pg 20, [0284], lines 9-19).

11. As per claim 8, Shear teaches a service/performance history learning analysis module operable to apply artificial intelligence to find task bottlenecks in said station and said other stations, and to bring these to the attention of a network administrators if it can not solve them itself (pg 24-25, [0354]).

12. As per claim 9, Shear teaches a task failure management module, operable to transmit to said network a failure message in response to failure of said station successfully to complete a task being performed for one of said other stations (pg 24, [0345]).

13. As per claim 10, Shear teaches wherein said task failure management module is further operable to monitor for failure messages transmitted by one of its trusted stations and, in response thereto, to handle said failure message as a service request message for said failed task (pg 24, [0345] – [0349]).
14. As per claim 11, Shear teaches network comprising a plurality of stations according to claim 1 interconnected by a communication link (pg 22, [0311], [0313]).
15. As per claim 12, Shear teaches wherein there is no central server for said network (pg 17, [0245], [0244]).
16. As per claim 13, Shear teaches wherein said network operates to a protocol that permits stations to be removed from and added to said network dynamically (pg 8, [0092]).
17. As per claim 14, Shear teaches A method of distributing tasks in a network comprising a plurality of stations, all interconnected by respective network connections to a communication link, said method comprising:
 - transmitting a service request by a first station to its network connection and onto said network, said service request being directed to a trusted sub-group of said stations and specifying a task to be performed (pg 1, [0003]; pg 24, [0342]); and
 - receiving said service request by a second station, that is one of said trusted sub-group of stations, through its network connection and, in response thereto, transmitting to said network through its network connection an acceptance or refusal message in respect of said service request, said acceptance or refusal being decided having regard to said current status of said second station, as determined by a self assessment of said second station (pg 17, [251]; pg 24, [351], [352]); and
 - carrying out said task specified in said service request by said second station and returning a service result to said first station (pg 24, [0342]).

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18. As per claim 15, Shear teaches wherein said carrying out of said service request by said second station involves further distribution of said service by transmitting further service requests to a sub-group of said stations trusted by said second station (pg 24, [342] – [343]).

19. As per claim 16, Shear teaches computer software comprising program code means for carrying out a method according to claim 14 (pg 23, [0334]).

20. As per claim 17, Shear teaches a carrier medium carrying computer software according to claim 16 (pg 27, claim 46).

21. As per claim 18, Shear teaches the medium being a storage medium (pg 27, claim 46).

22. As per claim 19, Shear teaches the medium being a transmission medium (pg 24, [0343]).

Claim Rejections - 35 USC § 103

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shear et al. (hereinafter Shear), US 2001/0042043, in view of Hunt, US 6,629,123.

25. As per claim 2, Shear does not teach wherein said self assessment module is operable to determine a static status for said station based on hardware resources of said station and a dynamic status for said station based on current usage of said hardware resources.

25. Hunt teaches wherein said self assessment module is operable to determine a static status for said

station based on hardware resources of said station and a dynamic status for said station based on current usage of said hardware resources (Col. 19, lines 15-20).

26. It would have been obvious to one of ordinary skill in this art at the time of invention was made to combine the teaching of Shear and Hunt because they both dealing with sharing resources within a network utilizing artificial intelligence. Furthermore, the teaching of Hunt to allow determination of status of a station based on dynamic and static status would improve the load balancing for Shear's system by preventing any nodes in the network become overloaded.

27. As per claim 6, Hunt teaches a service requirement analysis module and a software resource repository in which a plurality of software modules are stored, said service requirement analysis module being operable to maintain said software resource repository by importing and exporting software modules to and from other stations having regard to demand in said station for such software modules (Col. 10, line 16; Col. 14, lines 21-22; Col. 30, lines 36-45).

28. As per claim 7, Shear and Hunt does not teach wherein said station is further operable to broadcast messages to said network offering software modules held in said software resource repository to said or each other trusted station. However it would have been obvious to one of ordinary skill in this art at the time of invention to include broadcast messages to network offering software modules held in software resource repository to other stations because doing so would improve the reusability of Shear and Hunt's system by recycle used software modules among other network nodes.

29. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shear et al. (hereinafter Shear), US 2001/0042043, in view of Theimer et al. (hereinafter Theimer) US 5,812,865.

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30. As per claim 5, Shear does not teach a task scheduler module arranged to monitor all tasks being performed in said station, including tasks initiated by said station for said station and tasks being performed in response to receipt of a service request from one of said other stations.

31. Theimer teaches a task scheduler module arranged to monitor all tasks being performed in said station, including tasks initiated by said station for said station and tasks being performed in response to receipt of a service request from one of said other stations (Col. 3, lines 3-18, lines 66-67; Col. 8, lines 60-61; Col. 19, lines 9-17; Col. 24, lines 46-56).

32. It would have been obvious to one of ordinary skill in this art at the time of invention was made to combine the teaching of Shear and Theimer because they both dealing with sharing resources within a network utilizing artificial intelligence. Furthermore, the teaching of Theimer to allow a task scheduler module arranged to monitor all tasks being performed in said station improve the fairness for Shear's system by allowing prioritized messages to get through first.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publications are cited to further show the state of the art with respect to "Distributed Service Provider".

- | | | |
|------|--------------|------------------|
| i. | US 5,034,882 | Eisenhard et al. |
| ii. | US 4,969,146 | Twitty et al. |
| iii. | US 5,603,054 | Theimer et al. |
| iv. | US 5,555,376 | Theimer et al. |
| v. | US 6,085,216 | Huberman et al. |
| vi. | US 5,978,940 | Newman et al. |

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Zhong whose telephone number is (703) 305-0718. The examiner can normally be reached on M-F 7am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CZ
October 29, 2003


ZARNI MAUNG
PRIMARY EXAMINER